

A Peak-To-Average Reduction Technique For Multi-Carrier Power Amplifiers

Inventor: Kiomars Anvari

Abstract:

A technique for peak-to-average reduction of multi-carrier signals is described. The input to the multi-carrier power amplifier is modified by a peak-to-average reduction circuit, prior to being applied to the amplifier. The peak-to-average reduction circuit uses a phase generator to create appropriate phase for each carrier to suppress the peak of the multi-carrier signal. The peak-to-average reduction circuit clips the multi-carrier input signal's samples before applying any phase rotation if they exceed a predefined value. The input to the peak-to-average reduction circuit could be a baseband, an intermediate frequency (IF) or radio frequency (RF) signal. The peak-to-average reduction is performed in digital domain.